PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS

AND INTERFERENCES

Ex parte Downing

Appeal No. _____

Serial No.:	10/650,348
Filed:	August 28, 2003
Art Unit:	3724
Examiner:	Kenneth E. Peterson
Applicant:	Daniel Ray Downing
Title:	METHOD FOR CUTTING ELASTOMERIC MATERIALS
Attorney Docket:	DN2001124D0ZX02
Confirmation No.:	6674

September 30, 2008

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

This brief is in furtherance of Appellants' Notice of Appeal filed July 30, 2008, appealing the decision of the Examiner dated April 30, 2008, finally rejecting claims 1-5, 20, 22 and 37 (all pending claims). A copy of the claims appears in the Claims Appendix to this brief.

The Commissioner is hereby authorized to charge the fee of Five Hundred Dollars and 00/100 ($500.00) to Appellants' Deposit Account No. 07-1725. Any additional charges or credits necessary to complete this communication may be applied to Deposit Account No. 07-1725.

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I.

I. Real Party in Interest

By virtue of an Assignment by the named inventors, the real party in interest of the present application is The Goodyear Tire & Rubber Company of Akron, Ohio. The Assignment has not been recorded in the U.S. Patent and Trademark Office.

II. Related Appeals and Interferences

There are no related appeals or interferences known to the Appellants or the Appellants' legal representative which will directly affect, or be directly affected by, or have a bearing on the decision of the Board in the present appeal.

III. Status of Claims

Claims 1-5, 20, 22 and 37 remain pending in the application after the final rejection mailed April 30, 2008, and are subject to this Appeal.

Claims 1-5, 20, 22 and 37 stand rejected under 35 U.S.C. 112, first paragraph as failing to comply with the enablement requirement.

Claims 1-5, 20, 22 and 37 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3, 20, 22 and 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bell et al. '508 in view of Benzing, II et al. '101.

Claims 4 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bell et al. '508 in view of Benzing, II et al. '101, and further in view of Sergel et al. '601 or Oldeman '774.

The amendment filed 27 AUG 07 wherein Figures 5A, 8b were amended were objected to under 35 USC 132(a).

IV. Status of Amendments

There are no outstanding amendments. No amendments have been filed subsequent to the Final Office Action mailed on April 30, 2008.

V. Summary of Claimed Subject Matter

Claims 1 and 37 are independent claims. Claims 2-5, 20 and 22 depend from claim 1.

Independent claim 1: A method of cutting a strip 1 of elastomeric material into segments 10 of a desired length is claimed and shown in figures 1-10. As shown in Figures 1-3, the strip 1 has a width W, and is formed of a plurality of tire components (20,30,40,50,60,70), at least one of the tire components being a cord reinforced component 22 that are parallel to each other, and oriented in the direction of a cutting path formed across the width W of the strip. The method comprises the steps of

moving a cutting device (120) into cutting engagement of the strip (1) while supporting the strip on an anvil (110) (Figures 5A and 9);

positioning the cutting edge 122 of the cutting device 120 at a skive angle less than 10 degrees relative to the strip 1 and at a gap distance (d) above the anvil 110 slightly less than or equal to the thickness of the cord reinforced component 22 (Figure 5A);

cutting through the entire strip 1 in a single cutting step while maintaining the gap distance (d) without cutting the cords 22, and forming a segment 10 (Figures 5B and 5C).

Independent claim 37: A method of cutting a strip 1 of elastomeric material into segments 10 of a desired length is claimed and shown in figures 1-10. As shown in Figures 1-3, the strip 1 has a width W, and is formed of a plurality of tire components

(20,30,40,50,60,70), at least one of the tire components being a cord reinforced component 22 that are parallel to each other, and oriented in the direction of a cutting path formed across the width W of the strip. The method comprises the steps of

providing an anvil 110 having a first angled surface 111, and a second angled surface 112, wherein a transition point 114 is located at the intersection of the first angled surface and the second angled surface;

moving a cutting device 120 into cutting engagement of the strip while supporting the strip on said anvil 110;

positioning the cutting edge 122 of the cutting device 120 at a skive angle less than 10 degrees relative to the strip and at a gap distance (d) above the transition point on the anvil, wherein the gap distance (d) is slightly less than or equal to the thickness of the cord reinforced component;(Fig 5b)

cutting through the entire strip in a single cutting step while maintaining the gap distance (d) and without cutting the cords, and forming a segment.

VI. Grounds of Rejection to be Reviewed on Appeal

A. The rejection of Claims 1-5, 20, 22 under 35 U.S.C. 112, first paragraph as failing to comply with the enablement requirement.

B. The rejection of Claims 1-5, 20, 22 and 37 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention

C. The rejection of Claims 1-3, 20, 22 and 37 under 35 U.S.C. §103(a) as being unpatentable over Bell et al. '508 in view of Benzing, II et al. '101.

D. The rejection of Claims 4 and 5 under 35 U.S.C. §103(a) as being unpatentable over Bell et al. '508 in view of Benzing, II et al. '101, and further in view of Sergel et al. '601 or Oldeman '774.

E. The New Matter Objections of Figures 5a, 8b under 35 USC 132(a)

VII. Argument

A. The Rejections of Claims 1-5, 20, 22 and 37 under 35 U.S.C. §, 112, first paragraph.

Claims 1-5, 20 and 22 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The office action states: "In general, the details of the cutting action do not enable one of ordinary skill to use the device. The following questions should help Applicant ascertain the specification shortcomings." The office action then recites numerous questions.

35 USC 112, first paragraph requires that specification teach a person skilled in the art how to make and use the claimed invention without undue experimentation. Before any analysis of enablement can occur, it is necessary for the examiner to construe the claims. M.P.E.P. at 2164.04. In order to assert a *prima facie* case of lack of enablement, the Examiner must provide a rational basis as to why the specification does not enable a person skilled in the art how to make and use the invention without undue experimentation. The Examiner must provide some reason why the disclosure is insufficient or why the Examiner does not believe the statements therein. As stated by the court in *In re Marzocchi*, "it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble

and expense of supporting his presumptively accurate disclosure". 439 F.2d at 224, 169 USPQ at 370.

The MPEP at 2164.04 further states that the examiner is required to make specific findings of fact, supported by the evidence and then draw conclusions based on these findings of fact. References should be supplied if possible to support a prima facie case of lack of enablement, but are not always required. However, specific technical reasons are always required. Id.

The office action has failed to interpret the claims and set forth the definitions used to interpret the claims, which is required by MPEP at 2164.04. The office action has failed to set forth specific findings of fact supported by the evidence as well as specific technical reasons as required by MPEP 2164.04. In short, the office action has failed to set forth a reasonable explanation supported by findings of fact and evidence as to why the scope of protection provided by the claims is not adequately enabled by the disclosure. Finally, the office action has not addressed the factors set forth in MPEP 2164.01a, pertaining to the undue experimentation factors.

With respect to claim 1, the office action appears to doubt the existence of the claimed gap distance (d). The Examiner does not believe a gap distance d is maintained while making the cut. Page 3, last line of paragraph 2, Examiner's Office communication of 10/01/2007. Support for this claim limitation may be found in the following paragraphs of Applicant's specification:

Paragraph 15: "In another embodiment the step of positioning the cutting edge of the ultrasonic knife includes the step of setting a gap distance (d) above the support approximately slightly less than or equal to the thickness of the cord reinforced component, along the region wherein the support is oriented at the angle θ1. "

paragraph 43 ... As can be seen, the ultrasonic blade (120) is positioned at a slight distance (d) spaced above the anvil (110). That distance creates a gap (d) of approximately 0.0030 inch. This gap (d) is sufficient to allow the cord reinforced tire component (20) to pass under the ultrasonic blade (120) during the cutting procedure. ...

paragraph 44: ..."On the opposite side of the cut, the cords (22) are pressed under the ultrasonic blade (120) and occupy the gap (d) that was provided between the anvil (110) and the blade (120) for this cutting procedure. As illustrated, three or more cords (22) are shown adjacent to the flat surface (122) of the cutting blade (120). The ability of the cords (22) to be lifted over the blade (120) permits the ultrasonic knife blade (120) to pass through the cords (22) without cutting any of the cords 22."

paragraph 47: ..." It has been found that by transitioning the support (110) from an angle $\theta 1$ at one surface (111) to $\theta 2$ at the other surface (112) and fixing the gap (2) at the transition location (114), one can predict where the cord (22) impact with the blade edge 121 will occur."

original claim 6, The method of claim 2 further comprises the step of positioning the cutting edge of the ultrasonic knife at a gap distance (d) above the strip slightly less than or slightly to the greater than thickness of the cord reinforced component.

Finally, support for the gap distance (d) is shown in Figures 5a-5c.

If the Examiner does not believe the gap distance (d) is maintained during the cut or otherwise exists, the Examiner has the burden to provide contrary evidence that the claimed limitation is not taught by Applicant's specification or to provide further evidence that the claimed gap does not exist when making the cut. According to the MPEP, the examiner should **never** make the determination of enablement based upon personal opinion. See

MPEP 2164.05. While it may be the case that the Examiner does not understand how or why the invention works, 35 USC 112 only requires the teachings to enable a person skilled in the art how to make and use the invention without undue experimentation. Further, case law states that "An inventor has no legal requirement to comprehend the scientific principles on which practical effectiveness of his invention rests." Application of Aufhauser, 399 F.2d 275, 283. Applicant has met the enablement standard. Applicant has also described how he believes the invention works in his own language, even though not required. See paragraphs 46 and 47.

The office action further objects to paragraph 17 of the specification which recites "the means for supporting the strip has two surfaces inclined at angles θ1 and θ2 respectively, θ1 is preferably set about 2 degrees less than skive angle α, the angle θ2 is about 2 degrees more than the skive angle α". The office action inquires as to what the angles are measured relative to. The angles θ1 and θ2 are shown in Figure 5a, and are measured relative to the horizontal. As previously stated, the skive angle is explicitly defined in paragraph 38 of the definitions section of Applicant's specification and is measured relative to the plane of the material being cut. The specification teaches that the anvil has surfaces angled at θ1 and θ2 forming a transition point (paragraph 47) and fixing the gap (d) at the transition point. The Examiner opines that if θ2 is different from the skive angle α, then the gap will constantly change as the blade penetrates, and that if the gap is not maintained, then there is no gap. Applicant respectfully disagrees. As stated in claim 1, the gap is maintained during the cut. The examiner has not set forth evidence to support his position other than his opinion.

It is important to note that Applicant has previously attempted to answer all of the examiner's questions, has submitted a video demonstrating the invention in practice as well as additional photographs to assist the examiner's understanding of applicant's invention.

Based upon the foregoing, Applicant respectfully requests these rejections be withdrawn.

B. The Rejections of Claims 1-5, 20, 22 and 37 under 35 U.S.C. §, 112, second paragraph

Claims 1-5 and 20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The final office action states that the Examiner does not understand the specification, and therefore does not understand the scope of the claims, and how much weight should be given to the gap, and the angles $\theta 1$, $\theta 2$ and α. Applicant respectfully disagrees. The gap of the anvil, and the angles $\theta 1$ and $\theta 2$ are part of the claimed invention, and therefore should be given patentable weight. Based upon the foregoing, Applicant respectfully requests these rejections be withdrawn.

C. The Rejection of Claims 1-3, 20, 22 and 37 under 35 U.S.C. §103(a)

Claims 1-3 and 20, 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bell et al. '508 in view of Benzing II et al. '101. This rejection is respectfully traversed for the following reasons. The Bell reference teaches cutting through unreinforced rubber sheets and does not teach cutting through reinforced ply. Further, Bell does not teach nor suggest orienting his cutting element at the claimed gap distance (d), which is slightly less than or equal to the thickness of the cord reinforced component. According to Bell's specification at column 8, lines 26-36, the free end of the blade 46 is received or anchored in a pocket of a blade rest, which is received in a channel 12 of the anvil. Therefore, Bell does not teach nor describe that the cutting edge of the cutting element is set at a gap distance (d) above the

anvil. The Benzing reference, which is owned by Applicant (and the inventor of this case is also a named inventor), teaches a two-step process for cutting through reinforced ply. First the blade is oriented at an angle Beta in order to position the cutting element between two parallel cords. Then the blade is oriented at angle theta in order to complete the cut. See Abstract of Benzing. While Benzing teaches cutting through reinforced ply without cutting through cord, it requires a two step process. Further, the claimed gap distance (d) is not taught. Thus, the references alone or in combination do not teach nor suggest Applicant's claimed process. As Bell et al. '508 in view of Benzing II et al. '101 fails to establish *prima facie* obviousness of the invention as recited in claims 1-3 and 20, it is respectfully requested that this rejection be withdrawn.

D. <u>The Rejection of Claims 4 and 5 under 35 U.S.C. §103(a)</u>

Claims 4 and 5 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al. '508 in view of Benzing II et al. '101 and further in view of Sergel et al. '601 or Oldeman '774. This rejection is respectfully traversed for the following reasons. See the reasons, above. Further, neither the Sergel reference nor the Oldeman reference is concerned with cutting reinforced ply. As Bell et al. '508 in view of Benzing II et al. '101 and further in view of Sergel et al. '601 or Oldeman '774 fails to establish *prima facie* obviousness of the invention as recited in claims 4 and 5, it is respectfully requested that this rejection be withdrawn.

E.The New Matter Objections of Figures 5a, 8b under 35 USC 132(a).

The office action objected to amendments made to Figure 5a and Figure 8b under 35 USC 132(a). Applicant had amended Figure 5a to illustrate the skive angle α. First, the skive angle is well known to persons skilled in the art of cutting tire components. Secondly, applicant explicitly defined the skive angle in the definition section of the specification,

which recites: " skive angle refers to the cutting angle of a knife with respect to the material being cut, the skive angle is measured with respect to the plane of the flat material being cut". Applicant simply amended Figure 5a to show the skive angle on the figure in accord with its definition in the specification and also in accord with common use of the term by those skilled in the art.

Figure 8b was also amended to correct an obvious error wherein the skive angle was mis identified relative to the skived segment end. Figure 8b was amended to correct an obvious error, replacing "α" with "90-α". Applicant's specification was directed to cutting tire components with a skived end for splicing, so a person skilled in the art would understand the misidentification of the skive angle to be a obvious error.

For the foregoing reasons, it is respectfully requested these objections be withdrawn.

Conclusion

This case was previously allowed **twice** by Primary Examiner Charles Goodwin. In fact the issue fee had been paid. After the first allowance, Examiner Goodwin withdrew the case from allowance based upon new art cited by the applicant. After Examiner Goodwin considered the new art, claims 1-5, 20 and 22 were allowed for the second time on 10/19/2006. Examiner Goodwin was a Primary Examiner. Examiner Goodwin did not raise any new matter rejections nor enablement rejections. On 2/26/2007 new examiner Peterson vacated all indications of allowable subject matter. Examiner Peterson did not cite any additional prior art. Examiner Peterson failed to explain why Primary Examiner Goodwin committed clear error. According to the M.P.E.P. at 706.04, "full faith and credit should be given to the search and action of a previous examiner unless there is a clear error in the previous action or knowledge of other prior art. In general, an examiner should not take an

entirely new approach or attempt to reorient the point of view of a previous examiner, or make a new search in the hope of finding something. Amgen, Inc. c. Hoechst Marion Roussel, Inc., 126 F. Supp 2d 69, 139, 57 USPQ2d 1449, 1499-50 (D. Mass. 2001)."

Applicant respectfully requests that full faith and credit be given to the previous Primary Examiner's allowance in light of the fact that no additional art was cited nor was any reasons for clear error were given.

For the reasons stated above, Appellants respectfully urge the Board to reverse the rejections of claims 1-5, 20, 22 and 37.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (previously presented) A method of cutting a strip of elastomeric material into segments of a desired length, the strip having a width W, the strip being formed of a plurality of tire components, at least one of the tire components being a cord reinforced component, the cords being substantially parallel and oriented in the direction of a cutting path formed across the width W of the strip; the method comprising:

moving a cutting device into cutting engagement of the strip while supporting the strip on an anvil;

positioning the cutting edge of the cutting device at a skive angle less than 10 degrees relative to the strip and at a gap distance (d) above the anvil slightly less than or equal to the thickness of the cord reinforced component;

cutting through the entire strip in a single cutting step while maintaining the gap_distance (d) without cutting the cords, and forming a segment.

2. (previously presented) The method of cutting segments of claim 1 further comprises the step of: orienting said cutting edge at an acute angle β relative to the strip cutting path.

3. (original) The method of cutting segments of claim 1 further comprises the steps of movably restraining the strip ahead of the cutting.

4. (previously presented) The method of cutting segments of claim 1 wherein the steps of supporting the strip include supporting the strip at an angle $\theta 1$, less than the skive angle α on one side of the cutting path and an angle $\theta 2$ greater than the skive angle α on the opposite side of the cutting path.

5. (previously presented) The method of cutting segments of claim 4, wherein the location of the cutting plane occurs approximately at the location wherein the supporting angle changes from $\theta 1$ to $\theta 2$.

Claims 6-19 (canceled)

20. (previously presented) The method of claim 4 wherein there is a discontinuity in the support surface where the support angle changes from $\theta 1$ to $\theta 2$.

21. canceled.

22. (previously presented) The method of claim 1 wherein the cutting device is an ultrasonic knife.

Claims 23-36 (canceled)

37. (previously presented) A method of cutting a strip of elastomeric material into segments of a desired length, the strip having a width W, the strip being formed of a plurality of tire components, at least one of the tire components being a cord reinforced component, the cords being substantially parallel and oriented in the direction of a cutting path formed across the width W of the strip; the method comprising:

providing an anvil having a first angled surface, and a second angled surface, wherein a transition point is located at the intersection of the first angled surface and the second angled surface;

moving a cutting device into cutting engagement of the strip while supporting the strip on said anvil;

positioning the cutting edge of the cutting device at a skive angle less than 10 degrees relative to the strip and at a gap distance (d) above the transition point on the anvil, wherein the gap distance (d) is slightly less than or equal to the thickness of the cord reinforced component;

cutting through the entire strip in a single cutting step while maintaining the gap_distance (d) and without cutting the cords, and forming a segment.

IX. EVIDENCE APPENDIX

There is no evidence submitted in this Appeal.

X. RELATED PROCEEDINGS APPENDIX

There is no related proceeding in this Appeal.